503.30414C55

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: KATO, et al.

Application No.: 10/796,207

Filed: March 10, 2004

For: VACUUM PROCESSING APPARATUS AND OPERATING METHOD THEREFOR

Group Art Unit: 1753

Examiner: TBD

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR § 1.97 AND § 1.98

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

July 9, 2004

Sir:

Pursuant to Applicants' duty to disclosure, enclosed please find documents for consideration by the Examiner during examination of the above-identified application. Also enclosed is a Form, substantially equivalent to Form PTO-1449, listing the enclosed documents.

This Information Disclosure Statement is being submitted prior to a first Office Action on the merits in the above-identified application. Accordingly, requirements of 37 CFR § 1.97(b) are satisfied.

The following comments are made in connection with the enclosed documents.

Enclosed U.S. Patent No. 5,536,128 corresponds to Japanese Patent Document (Laid-Open) No. H2(1990)-117512. In the modified embodiment 19 in

column 29 of this patent, there is a description about a preferred embodiment for supplying a wafer to the processing device 60 (note Fig. 47) under application of a cassette. It is respectfully submitted, however, that this patent has no description at all about a technical concept according to the present invention that the wafer can be taken out of any position within a plurality of cassettes and it can be returned back to this original position of the original cassette, upon completion of the processing. In addition, other embodiments as described in this patent do not have a description of the processed wafer being returned back to the original position of the original cassette. Furthermore, No. 5,536,128 has no description at all about a concept that the processing device 60 has a plurality of chambers.

The article entitled "Parallel-Implantation Ion Implantation Device" has a description, with regard to an end station, that wafers taken out from the respective cassettes will be returned to the positions where they have been first taken out after the completion of implantation processing. Note page 54 of this article and Fig. 10. However, it is respectfully submitted that the system disclosed in this article has only one processing chamber. In addition, this article has a description saying that the wafers are taken out in sequence from the lowest stage slot of the load carrier by the atmospheric loader, and it is respectfully submitted that the device disclosed in the article is not a configuration in which the wafer can be taken out from any location within a plurality of cassettes.

The enclosed article entitled "Drafts in Symposium of VLSI and FA Technology" describes, in the column of (2) Cassette Transfer on page 35, that "Each cassette is automatically controlled so that it is taken out from the cassette and is also returned to the original position in the cassette after end of etching

process". However, this publication has no description saying that the wafer can be taken out from any location within a plurality of cassettes.

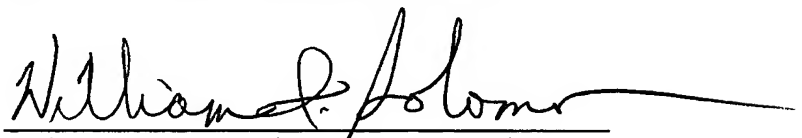
The enclosed Japanese Patent Document No. 64-36042, at line 12 in the left lower column in page 3, has a description saying that "the wafer is taken out from the chamber 3 at the position P1 and housed to the original position of the cassette 20". However, referring to Fig. 2 of this patent document, the structure described therein is not a configuration in which the wafer can be taken out from any location within a plurality of cassettes.

For purposes of satisfying 37 CFR §1.98(a)(3), note the foregoing discussions concerning the enclosed documents, as well as English translations/abstracts of the enclosed documents.

In view of the foregoing, it is respectfully submitted that all applicable requirements of 37 CFR §§1.97 and 1.98 have been satisfied, in connection with each of the documents listed on the enclosed Form. Accordingly, consideration of the listed documents, upon examination of the above-identified application, is respectfully requested.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, Deposit Account No. 01-2135 (Docket No. 520.30414C55), and please credit any excess fees to such deposit account.

Respectfully submitted,
ANTONELLI, TERRY, STOUT & KRAUS, LLP

By 
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of

Complete if Known	
Application Number	10/796,207
Filing Date	03/10/2004
First Named Inventor	Kato, et al.
Art Unit	1753
Examiner Name	TBD
Attorney Docket Number	520.30414C55

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 5,536,128		7/16/1996	Shimoyashiro, et al.	
		US-				
		US-				

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]–Number[4]–Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
		JP 64-036042	2/7/1989	Kokusai Electric Co., Ltd.		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
		S. Nakagawa, "Dry Etching", Drafts in Symposium of VLSI and FA Technology, April 1985, pages 1-14	
		N. Nagai, "Parallel-Implantation Ion Implantation Device "NH-20SP"", Special Issue/Semiconductor Manufacturing Device of Half-Micron Age, pages 1-12, 3/1990	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.